Summary of 2024 Biology Recommendation Report

The following provides a summary of the 2024 CCN Biology Recommendation Report.

Recommendation

Course Number and Subject Codes: BI, BIO, or BIOL 221Z

Course Title: Principles of Biology: Cells

Course Credits: 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.)

Course Description: Explores fundamental biological concepts and theories about the cellular and molecular basis of life including cell structure and function, metabolism, genetic basis of inheritance and how information flows from DNA to proteins, with a focus on the iterative process of science. Intended for science majors.

Course Learning Outcome Introductory Statement:

This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to:

For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017)

For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020)

Course Learning Outcomes:

1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.
2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society.
3. Describe the structure and related functions of major classes of biomolecules.
4. Differentiate cell components and their functions, emphasizing them as a system of interacting parts.

5. Compare and contrast anabolic (photosynthesis) and catabolic (respiration and fermentation) pathways emphasizing the transformation of energy and matter.
6. Articulate how cells store, use, and transmit genetic information.
7. Explain how mutation and genetic recombination contribute to phenotypic variation and evolution.

Course Number and Subject Codes: BI, BIO, or BIOL 222Z

Course Title: Principles of Biology: Organisms

Course Credits: 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.)

Course Description: Explores fundamental biological concepts and theories about the structure and function of diverse organisms (including plants and animals), evolution and development, transformation of energy and matter, and body systems at a multicellular organismal level. Intended for science majors.

Course Learning Outcome Introductory Statement:

This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to:

For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017)

For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020)

Course Learning Outcomes:

1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.
2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society.
3. Explain how morphology relates to physiology across diverse organisms.
4. Describe how biological systems detect and respond to different internal/external environmental conditions through feedback.
5. Compare and contrast strategies for achieving homeostasis.

6. Explain how developmental and environmental processes influence the evolution of structures, functions, and life cycles across diverse organisms.

Course Number and Subject Codes: BI, BIO, or BIOL 223Z

Course Title: Principles of Biology: Ecology and Evolution

Course Credits: 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.)

Course Description: Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors.

Course Learning Outcome Introductory Statement:

This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to:

For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017)

For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020)

Course Learning Outcomes:

1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.
2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society.
3. Provide evidence for phylogenetic relationships which illustrate the unity and diversity of life.
4. Describe how adaptation, development, mutation, and the environment affect organismal evolution.
5. Apply mathematical models to describe how populations change through time in relation to biotic and abiotic factors.
6. Explain how organisms and their environments affect each other across different temporal and spatial scales.

7. Interpret models explaining the flow of energy and cycling of matter in ecosystems.

CCN Subcommittee Recommendation Report

Biology

Subcommittee Members: Arwyn Larson, Ashley Robart, Brian Myers, Edward, Andree, Hui-Yun Li, Jana Prikryl, Jherime Kellerman, Joe Meyer, Jonathan Christie, Josephine Pino, Lisa Bartee, Lori Kayes, Sarah Fuller, Stephen Scheck

Co-chairs: Dr. Stacey Kiser and Dr. Radhika Reddy

November 15, 2024

Date of last meeting

November 15, 2024

Plans for the next meeting

This report contains the final recommendations of the Common Course Numbering (CCN) 2024 Biology Subcommittee. This subcommittee recommended common course numbers, subject codes, credits, course descriptions, and course learning outcomes for three biology courses identified by the Transfer Council as commonly transferred between public institutions in Oregon. We have completed this work. In the "Action Items In-progress/Pending" section below, we provide suggestions for future tasks that our subcommittee could complete in the case that we are reconvened. We acknowledge that we may be reconvened more quickly, depending upon the acceptance of recommendations in this report.

Overview

Subcommittee Meetings and Purpose

Our subcommittee convened in January 2024 to align three courses: BI/BIO/BIOL 221, 222, and 223, which are structured as linked lecture and lab courses. We held biweekly meetings of 90 minutes from January to June and resumed again from September to November 2024.

The CCN Biology Subcommittee has aligned these biology courses across Oregon institutions as part of the Common Course Numbering (CCN) initiative. This agreed upon alignment is contingent upon a five credit course structure. Reducing the credit allocation to four will require substantial revision of Course Descriptions and Course Learning Outcomes to meet appropriate standards of student effort for a four credit course.

Below is an overview of our key activities and decisions as documented in our meeting minutes.

Course Numbering, Subject Codes, and Titles

The subcommittee unanimously approved the numbering system for these courses as 221Z, 222Z, and 223Z, using subject codes BI/BIO/BIOL for institutional flexibility as

per the CCN framework. The course titles were finalized as *Principles of Biology: Cells, Principles of Biology: Organisms,* and *Principles of Biology: Ecology and Evolution*.

Course Descriptions

This sequence focuses on biology within a cell, within an organism, and within an ecosystem. BI/BIO/BIOL 221Z focuses on cellular biology, BI/BIO/BIOL 222Z on organismal biology, and BI/BIO/BIOL 223Z on ecology and evolution.

The committee engaged in extensive discussion to ensure consistency in course descriptions. Debate regarding the inclusion of specific organisms in the *Principles of Biology: Organisms* (BI/BIO/BIOL 222Z) course description was resolved by requiring the inclusion of both plants and animals while allowing flexibility in the coverage of additional organisms, as appropriate.

Any reduction of credits below would require new course descriptions and be unapproved by this committee.

Course Learning Outcomes (CLOs)

The subcommittee worked extensively to draft and finalize the course learning outcomes for the BI/BIO/BIOL 221Z, 222Z, and 223Z sequence, covering cellular biology, organismal biology, and ecology and evolution. A key focus was embedding essential competencies within the outcomes. Members agreed on the importance of students being able to "do" science, communicate effectively, and understand the interplay between science and society. The iterative nature of scientific inquiry and the development of critical thinking were emphasized across all courses.

Some members expressed concern regarding the volume of content, particularly in BI/BIO/BIOL 221Z. To address this, we created an introductory statement for the course, encouraging broad conceptual mastery rather than rote memorization, which aligns with modern pedagogy and emphasizes *depth over breadth.*

The course learning outcomes align with the national standards set forth in the 2011 American Association for the Advancement of Science (AAAS) report, *Vision and Change in Undergraduate Biology Education*, which identified five Core Concepts and six Core Competencies essential for biology majors. This alignment ensures that students gain a solid foundation in biology focusing on scientific literacy, analytical thinking, and evidence-based problem-solving. Instructors and students are encouraged to refer to the *BioCore Guide* (Brownell et al., 2017) for Core Concepts and the *BioSkills Guide* (Clemmons et al., 2020) for Core Competencies, which provide practical frameworks to support a standardized approach to undergraduate biology education.

The approved CLOs are based upon a five-credit class integrating lecture and lab. Any reduction of credits below would require new CLOs and be unapproved by this committee.

Credit Allocation

After establishing subject codes, course numbers, titles, descriptions, learning outcomes, and core content for BI/BIO/BIOL 221Z, 222Z, and 223Z, our final task was determining an appropriate credit designation and course numbering structure. This discussion was driven by a commitment to student success—especially for underserved students—and focused on the advantages of a unified five-credit model that integrates lecture and lab under a single course number. Currently, 16 of 24 institutions offer each course as a five-credit course. Many subcommittee members representing institutions currently assigning four credits, including the members of the state's largest program at Oregon State University, voted in favor of shifting to the five-credit model.

Emphasis on Content Volume and Pedagogical Best Practices

The extensive content in these courses demands significant instructional time for students to fully engage with foundational biology concepts. A five-credit model best supports comprehensive contact hours, enabling active learning, peer-supported activities, and strong instructor-student interaction—practices shown to build confidence and enhance student success. Many subcommittee members agree that reducing to a four-credit model would limit these essential pedagogical approaches.

Institutions currently offering five credits find the added time crucial for helping students master complex content, build foundational skills, and prepare for subsequent courses. This structure aligns with "Vision and Change" guidelines promoting active, inclusive, and cohesive learning for long-term retention. Furthermore, aligning with similar courses like Chemistry, also moving to a five-credit statewide standard (2024), ensures consistent and transparent expectations in content and workload.

Broad Committee Support for Five Credits

A substantial majority of committee members (12 of 13) support the five-credit, unified course model to reflect the rigor and depth required in BI/BIO/BIOL 221Z, 222Z, and 223Z. This approach aligns with other rigorous science courses, like Chemistry, which has also adopted a five-credit format. Assigning a four-credit load risks implying a reduced workload, despite the substantial lab component. The five-credit designation also ensures sufficient time to cover essential concepts

comprehensively, supporting students planning to transfer or continue into advanced biology courses.

Justification for Merging Lab and Lecture Courses Under a Single Course Number

A small minority of institutions (three of 24) currently separate lecture and lab into distinct course numbers, while the remaining 21 institutions include the lecture and lab components under a single course number. We recommend a single course number for both components to reflect the integrated nature of the learning experience. Separating lecture and lab disconnects the cohesive learning process that is critical in foundational biology courses, where conceptual understanding in lecture is directly reinforced through lab-based applications. Assigning a single course number emphasizes that integration of the lecture and laboratory components of a course provide a comprehensive, interactive learning experience.

Integrated Learning Gains

Given the strong interdependence between the lecture and lab, students who fail one component would benefit most from retaking the entire course rather than just the failed portion. The integrated course structure ensures that students can revisit both theoretical and practical components, building a holistic understanding that reinforces both. This approach also aligns with research indicating that learning gains in biology are significantly enhanced when lecture concepts are actively applied in lab settings. Repeating both components allows students to strengthen their knowledge foundation in a cohesive, supportive environment, ultimately improving their readiness for advanced biology coursework.

Oregon Transfer Compass

Action Items Completed

Chart approved by CCN Biology Co-chairs Radhika Reddy and Stacey Kiser, November 15, 2024.

Recommendation	Vote
BI/BIO/BIOL 221Z	
Course Number and Subject Codes: BI, BIO, or BIOL 221Z **Rationale:** The subject codes BI, BIO, or BIOL designates this course as a core offering within the Biology program, intended to meet foundational requirements for science majors. The allowable use of three subject codes will allow all institutions to use their current subject codes. The number 221 indicates that this course is one in a series that builds foundational knowledge. The "Z" suffix designates curricular alignment across Oregon public institutions.	Yes 12 No 0 Abstain 0 **Passed**
Course Title: Principles of Biology: Cells **Rationale:** The title "Principles of Biology: Cells" succinctly conveys the course's primary focus on cellular and molecular biology. This course emphasizes the foundational role that cellular processes play in understanding biology, which is essential for further study in the life sciences.	Yes 11 No 0 Abstain 0 **Passed**
Course Credits: 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.) **Rationale:** This course awards 5 credits to reflect both the depth and scope of the material covered, including significant laboratory components. The credit allocation aligns with the course's intended outcomes, hands-on learning through laboratory work, and the comprehensive understanding required by students progressing to advanced biological studies.	Yes 12 No 1 Abstain X **Passed**
Course Description: Explores fundamental biological concepts and theories about the cellular and molecular basis of life, including cell structure and function, metabolism, genetic basis of inheritance and how information flows from DNA to proteins, with	Yes 13 No 0 Abstain X **Passed**

a focus on the iterative process of science. Intended for science majors. **Rationale:** The description captures the essential topics of cellular biology, including foundational concepts like cell structure, genetics, and biochemical processes. Emphasizing the iterative process of science introduces students to critical thinking and empirical methods, crucial for developing skills necessary in scientific research and understanding. The focus on majors indicates the depth of content necessary for success in upper-level biology courses. **Course Learning Outcome Introductory Statement:** This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to: For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017) For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020) **Rationale:** The inclusion of this statement establishes a foundational framework for the course, aligning its learning outcomes with nationally recognized standards in biology education. These reports provide a robust, research-based blueprint for modernizing biology curricula, ensuring that students develop both conceptual understanding and essential skills needed for success in the discipline. The recommended course design emphasizes a comprehensive and integrative approach to biology, fostering critical thinking, quantitative reasoning, and interdisciplinary connections. **Course Learning Outcomes:** 1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.	Yes 13 No 0 Abstain X **Passed** Yes 12 No 0 Abstain 0 **Passed**

2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society. 3. Describe the structure and related functions of major classes of biomolecules. 4. Differentiate cell components and their functions, emphasizing them as a system of interacting parts. 5. Compare and contrast anabolic (photosynthesis) and catabolic (respiration and fermentation) pathways emphasizing the transformation of energy and matter. 6. Articulate how cells store, use, and transmit genetic information. 7. Explain how mutation and genetic recombination contribute to phenotypic variation and evolution. **Rationale:** The course learning outcomes for BI/BIO/BIOL 221Z - Principles of Biology: Cells are designed to provide students with a comprehensive foundation in cellular and molecular biology, equipping them with essential skills for scientific inquiry and analysis. These outcomes emphasize the iterative nature of scientific investigation, enabling students to approach biological questions with a critical, evidence-based perspective. By covering biomolecular structure, cellular processes, genetic information flow, and metabolic pathways, students will gain a thorough understanding of how cells function as interconnected systems. This foundation is further reinforced through analysis of genetic variation and its role in evolution, fostering an appreciation for how cellular and molecular biology informs broader biological concepts and societal issues. Collectively, these outcomes prepare students to engage deeply with advanced biological studies and apply scientific thinking to contemporary challenges in the life sciences.	
BI/BIO/BIOL 222Z	
Course Number and Subject Codes: BI, BIO, or BIOL 222Z **Rationale:** The subject codes BI, BIO, or BIOL designates this course as a core offering within the Biology program, intended to meet foundational requirements for science majors. The allowable use of three subject codes will allow all institutions to use their current subject codes. The number 222 indicates that this course	Yes 12 No 0 Abstain 0 **Passed**

is one in a series that builds foundational knowledge. The "Z" suffix designates curricular alignment across Oregon public institutions. **Course Title:** Principles of Biology: Organisms **Rationale:** The title "Principles of Biology: Organisms" clearly conveys the focus on multicellular organismal biology, encompassing both plants and animals. This title signals to students that the course will emphasize understanding organismal-level structures and functions, serving as a foundation for more advanced biological studies. **Course Credits:** 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.) **Rationale:** Awarding 5 credits for this course reflects its comprehensive scope, which includes lecture and laboratory components. The additional credit acknowledges the depth of material, hands-on learning, and the time required to master the concepts. This is aligned with course expectations for science majors who require a solid grounding in organismal biology. **Course Description:** Explores fundamental biological concepts and theories about the structure and function of diverse organisms (including plants and animals), evolution and development, transformation of energy and matter, and body systems at a multicellular organismal level. Intended for science majors. **Rationale:** The description highlights the primary areas of focus, such as organismal structure, function, evolution, and energy transformations. Emphasizing multicellular biology at this level is crucial for science majors as it connects molecular and cellular foundations to the complexity of entire organisms, bridging various biological fields and preparing students for further study. **Course Learning Outcome Introductory Statement:** This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5	Yes 11 No 0 Abstain 0 **Passed** Yes 12 No 1 Abstain X **Passed** Yes 13 No 0 Abstain X **Passed** Yes 13 No 0 Abstain X **Passed**

overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to: For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017). For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020). **Rationale:** The inclusion of this statement establishes a foundational framework for the course, aligning its learning outcomes with nationally recognized standards in biology education. These reports provide a robust, research-based blueprint for modernizing biology curricula, ensuring that students develop both conceptual understanding and essential skills needed for success in the discipline. The recommended course design emphasizes a comprehensive and integrative approach to biology, fostering critical thinking, quantitative reasoning, and interdisciplinary connections. **Course Learning Outcomes:** 1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding. 2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society. 3. Explain how morphology relates to physiology across diverse organisms. 4. Describe how biological systems detect and respond to different internal/external environmental conditions through feedback. 5. Compare and contrast strategies for achieving homeostasis. 6. Explain how developmental and environmental processes influence the evolution of structures, functions, and life cycles across diverse organisms. **Rationale:** The course learning outcomes for BI/BIO/BIOL 221Z - Principles of Biology: Organisms are crafted to provide students with a foundational understanding of multicellular organism biology with a focus on structure, function, and evolutionary adaptations across diverse species. These outcomes emphasize	Yes 12 No 0 Abstain 0 **Passed**

the application of the scientific method, encouraging students to analyze data and draw evidence-based conclusions, fostering critical thinking and scientific literacy. By examining the relationship between morphology and physiology, feedback mechanisms, homeostasis, and the influence of development and environment on evolution, students gain a holistic view of how organisms function and adapt to their surroundings. Together, these outcomes prepare students for advanced studies in biology by equipping them with essential knowledge and the skills needed to approach biological questions within an organismal context.	
BI/BIO/BIOL 223Z	
Course Number and Subject Codes: Bi, BIO, or BIOL 223Z **Rationale:** The subject codes BI, BIO, or BIOL designates this course as a core offering within the Biology program, intended to meet foundational requirements for science majors. The allowable use of three subject codes will allow all institutions to use their current subject codes. The number 223 indicates that this course is one in a series that builds foundational knowledge. The "Z" suffix designates curricular alignment across Oregon public institutions. **Course Title:** Principles of Biology: Ecology and Evolution **Rationale:** The title "Principles of Biology: Ecology and Evolution" succinctly captures the course's focus on the mechanisms and processes that shape biodiversity and organism-environment interactions. This title signals a foundation in both ecological and evolutionary biology, essential areas for students pursuing science majors. **Course Credits:** 5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appear as a single grade item on transcripts.) **Rationale:** This course awards 5 credits to account for the breadth of content, including complex ecological and evolutionary concepts, and significant hands-on laboratory work. The additional credit reflects the time commitment and depth of understanding	Yes 12 No 0 Abstain 0 **Passed** Yes 11 No 0 Abstain 0 **Passed** Yes 12 No 1 Abstain X **Passed** Yes 13 No 0 Abstain X **Passed**

required, ensuring students receive comprehensive exposure to these critical biological fields. **Course Description:** Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors. **Rationale:** This description emphasizes the integration of evolutionary and ecological perspectives, exploring both diversity and unity among organisms. Covering populations, communities, and ecosystems, the course provides science majors with essential knowledge about biological interactions and adaptations, laying the groundwork for advanced biological study and application.	Yes 13 No 0 Abstain X **Passed**
Course Learning Outcome Introductory Statement: This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to: For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017). **Rationale:** The inclusion of this statement establishes a foundational framework for the course, aligning its learning outcomes with nationally recognized standards in biology education. These reports provide a robust, research-based blueprint for modernizing biology curricula, ensuring that students develop both conceptual understanding and essential skills needed for success in the discipline. The recommended course design emphasizes a comprehensive and integrative approach to biology, fostering critical thinking, quantitative reasoning, and interdisciplinary connections.	Yes 12 No 0 Abstain 0 **Passed**
Course Learning Outcomes: 1. Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.	

2. Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society.
3. Provide evidence for phylogenetic relationships which illustrate the unity and diversity of life.
4. Describe how adaptation, development, mutation, and the environment affect organismal evolution.
5. Apply mathematical models to describe how populations change through time in relation to biotic and abiotic factors.
6. Explain how organisms and their environments affect each other across different temporal and spatial scales.
7. Interpret models explaining the flow of energy and cycling of matter in ecosystems.

Rationale: The course learning outcomes for BI/BIO/BIOL 221Z - Principles of Biology: Ecology and Evolution are designed to provide students with a foundational understanding of how ecological and evolutionary processes shape the diversity of life and influence organismal interactions with their environment. These outcomes emphasize the scientific method, encouraging students to approach questions analytically, interpret data, and form evidence-based conclusions. By exploring phylogenetic relationships, evolutionary mechanisms, population dynamics, organism-environment interactions, and ecosystem-level energy and matter cycling, students gain an integrated perspective on the unity and diversity of life. This holistic approach prepares students for advanced studies in biology by equipping them with critical thinking skills and a deep understanding of the ecological and evolutionary principles essential for understanding and addressing contemporary biological issues.

Action Items In-progress/Pending

Although we do not recommend starting these tasks immediately, we consider them important future activities for this subcommittee to address at the specified time.

ACTIVITY	STATUS	
Review Cycle: The subcommittee proposes both an annual and triennial review. The annual review cycle for these courses should		Yes 11 No X Abstain 1 **Passed**
Further alignment work: (1) Assess the transfer effectiveness of the courses across institutions (2) Collect feedback regarding challenges, concerns, or potential areas for improvement from the 24 participating two- and four-year schools in the state.	As we complete the review cycle for BI 221Z, 222Z, and 223Z, additional alignment work may be necessary for closely related or prerequisite courses in biology or related STEM disciplines. Based on the content and course experience review outcomes, we recommend scheduling this further alignment work **after**	

	our initial assessment of the current cycle's outcomes, likely around Winter 2028. This timeline allows time to adapt to findings in BI/BIO/BIOL 221Z, 222Z, and 223Z, promoting coherence across the biology curriculum at Oregon public institutions.

Questions for Transfer Council

- We request that data collection mechanisms be established at the state level to monitor how common course numbering for BI/BIO/BIOL 221Z, 222Z, and 223Z impacts student success. Specifically, we suggest tracking the following:
    - D-F-W-I rates for these courses, as well as Associate's and Bachelor's degree completion rates. To gain insights into equity and inclusion, we request that this data be disaggregated by demographic factors, including but not limited to first-generation student status, Pell Grant eligibility, race, and gender. This information will help assess the effectiveness of these courses in their newly aligned format in supporting diverse student populations
    - The number of students who transfer within the entire system using these newly aligned courses
    - Accumulation of excess credits over time for students completing a degree to see if CCN has any effect on this
- Additionally, we seek clarity on the communication process for informing community colleges without subcommittee representation about our recommendations and Transfer Council decisions. Feedback from professional organization conferences, such as those involving the Oregon Community College Biology Faculty, has indicated concerns that non-represented institutions may not be receiving timely information about changes, impacting their ability to align courses effectively. Effective communication is essential to ensure that all Oregon public institutions have the necessary time to implement updates to BI/BIO/BIOL 221Z, 222Z, and 223Z and maintain curricular consistency across the state.

Other Notes

Signed by:

Name: Stacey Kiser Signature Stacey Kiser

Name: Radhika Reddy Signature Radhika Reddy

Date: November 15, 2024

Provide copies to:

CCN Biology Subcommittee	Arwyn Larson, Ashley Robart, Brian Myers, Edward Andree, Hui-Yun Li, Jana Prikryl, Jherime Kellerman, Joe Meyer, Jonathan Christie, Josephine Pino, Lisa Bartee, Lori Kayes Sarah Fuller, Stephen Scheck
Transfer Council Co-chairs	Jose Coll and David Plotkin
HECC	Donna Lewelling, Director of Community Colleges and Workforce Development, Higher Education Coordinating Commission Veronica Dujon, Director of Academic Policy and Authorization, Higher Education Coordinating Commission

— END OF REPORT–